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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

MENGISTU, AMARE

ART UNIT PAPER NUMBER

2673

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Please find below and/or attached an Office communication concerning this application or proceeding.

Response to Rule 312 Communication	Application No.	Applicant(s)	
	10/025,536	KISU, HIROKI	
	Examiner	Art Unit	
	Amare Mengistu	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ The amendment filed on 14 September 2004 under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.


b) ☒ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.

Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.


 Amare Mengistu
 Primary Examiner
 Art Unit: 2673

IN THE CLAIMS:

Please amend Claims 5, 6 and 7 as follows.

1. (Previously Presented) An image display apparatus which comprises an image display portion comprised of a pair of substrates disposed opposite to each other and having a peripheral edge sealed in order to form a sealed gap and an insulating liquid and a plurality of coloring charged particles disposed in the sealed gap, and which controls positions of the coloring charged particles so as to display an image, said apparatus further comprising:

an electrode sheet disposed to be movable in the gap between the pair of substrates;

a writing unit arranged opposite to an electrode surface of the electrode sheet and outside the image display portion; and

a unit for moving the electrode sheet and the writing unit in a first direction substantially parallel to the substrates and in a second direction substantially perpendicular to the first direction;

wherein the image display portion has flexibility, a pair of first pressing members is disposed so as to hold the image display portion, and the first pressing members are moved along the substrate while pressing the image display portion as the writing unit moves, and successively push the insulating liquid and the coloring charged particles out of the sealed gap.

2. (Previously Presented) The image display apparatus according to claim 1, wherein the writing unit has a photosensitive member, an electrode disposed so that the

photosensitive member is sandwiched between the electrode sheet and the electrode, and a light source which irradiates the photosensitive member with light.

3. (Previously Presented) The image display apparatus according to claim 1, wherein the writing unit has electrodes arranged in one row.

Claim 4. (Cancelled).

5. (Currently Amended) The image display apparatus according to claim [[4]] 1, wherein a voltage having the same polarity as a polarity of the coloring charged particle is applied to the first pressing member.

6. (Currently Amended) The image display apparatus according to claim [[4]] 1, wherein at least one of the pair of first pressing members is a roller.

7. (Currently Amended) The image display apparatus according to claim [[4]] 1, further comprising a liquid pressure adjustment chamber which is connected to the sealed gap, and which contains a surplus insulating liquid generated by operation of the first pressing member.

8. (Previously Presented) The image display apparatus according to claim 1, wherein the electrode sheet has one edge attached to a first wind-up shaft, and is moved when the wind-up shaft is rotated.

9. (Previously Presented) The image display apparatus according to claim 1, wherein the electrode sheet has one edge attached to a first wind-up shaft and the other edge attached to a second wind-up shaft, and is moved when these wind-up shafts are rotated.

10. (Previously Presented) The image display apparatus according to claim 9, wherein the electrode sheet is attached to the first or second wind-up shafts via a connection member.

11. (Previously Presented) The image display apparatus according to claim 1, wherein the image display portion has flexibility, and is contained while one end of the image display portion is wound.

12. (Previously Presented) The image display apparatus according to claim 1, further comprising three image display portions and three writing units, wherein the respective image display portions display different color images, and the image display portions are superposed upon one another so that color display is performed.

13. (Previously Presented) The image display apparatus according to claim 1, further comprising color filters of different colors, wherein the color filters are selectively coated with the coloring charged particles so that color display is performed.

14. (Previously Presented) The image display apparatus according to claim 1, wherein the image display portion is separated from the writing unit and is portable.

15. (Previously Presented) An image display apparatus which comprises an image display portion comprised of a pair of substrates disposed opposite to each other and having a peripheral edge sealed in order to form a sealed gap and an insulating liquid and a plurality of coloring charged particles disposed in the sealed gap, and which controls positions of the coloring charged particles so as to display an image, said apparatus further comprising:

a movable sheet member which is disposed to be movable in the gap between the pair of substrates, and which comprises means for stirring the insulating liquid of the image display portion by movement and simultaneously stripping the charged particles from the substrates; and

a writing unit which is arranged outside the image display portion, and which moves in a first direction substantially parallel to the substrate and in a second direction substantially perpendicular to the first direction while applying an electric field to the charged particles of the image display portion so as to write the image.

16. (Previously Presented) The image display apparatus according to claim 15, wherein the means for stirring the insulating liquid and simultaneously stripping the charged particles from the substrates includes a slide contact member facing the substrates.

17. (Previously Presented) The image display apparatus according to claim 15, wherein the means for stirring the insulating liquid and simultaneously stripping the charged particles from the substrates includes a through hole through which the insulating liquid and the charged particles can pass.

18. (Previously Presented) The image display apparatus according to claim 15, wherein the coloring charged particle is a magnetic toner, a magnet is disposed opposite to the image display portion, and the magnet is moved along the image display portion to perform cleaning of the coloring charged particles.

19. (Previously Presented) An image display apparatus which comprises an image display portion comprised of a pair of substrates disposed opposite to each other and having a peripheral edge sealed in order to form a sealed gap and an insulating liquid and a plurality of coloring charged particles disposed in the sealed gap, and which controls positions of the coloring charged particles so as to display an image, said apparatus further comprising:

an electrode sheet which is disposed to be movable in the gap between the pair of substrates, which comprises means for stirring the insulating liquid of the image display portion by movement and simultaneously stripping the charged particles from the substrates, and which applies a cleaning voltage during or after the movement and thereby performs cleaning of the coloring charged particles; and

a writing unit which is arranged opposite to an electrode surface of the electrode sheet and outside the image display portion, and which moves in a first direction substantially parallel to the substrate and in a second direction substantially perpendicular to the first direction while applying an electric field to the charged particles of the image display portion so as to write the image.

20. (Previously Presented) The image display apparatus according to claim 19, wherein the image display portion has flexibility, a first pressing member is disposed so as to

hold the image display portion together with the writing unit, and the first pressing member is pressed onto the image display portion while the writing unit writes the image.

21. (Previously Presented) The image display apparatus according to claim 20, wherein the electrode sheet is stopped, while the writing unit writes the image.

22. (Previously Presented) The image display apparatus according to claim 20, wherein the first pressing member is a rotatably supported roller.